

REMARKS/ARGUMENTS

Previously pending claims 1-17 have been cancelled and replaced by new claims 18-25.

A new declaration of the inventors is enclosed.

The Abstract has been amended as required.

Applicants believe the Section 112 rejection has been obviated by the new claims.

Reconsideration of the prior art rejection is respectfully requested in view of the new claims.

In the system and method of Suzuki et al. (US 4,949,553) during warm-up of the engine, when the temperature of the engine is still low, for instance, when the engine is started up with the air-conditioner set in the heating mode, the engine cooling water while being supplied is heated by engine exhaust gas (in an exhaust gas heat exchanger, i.e. the component producing waste heat). Heat of the engine cooling water thus heated is taken up through one of the heat exchangers (of the heat pump of the air-conditioner), then transferred to the other heat exchanger (of the heat pump of the air-conditioner), from which heat is radiated. It is therefore possible to supply hot air to the vehicle passenger compartment soon after the starting up of the engine (column 3, lines 28 to 38).

Suzuki et al. does not disclose either the last mentioned feature of new independent system claim 18, i.e. "said coolant pump for pumping said coolant directly into said cylinder head and then into said heating circuit during engine warm-up", or of the last mentioned feature of new independent method claim 24, i.e. "wherein during engine warm-up said coolant in said coolant circuit is pumped directly into said cylinder head and then into said heating circuit".

This feature produces both an accelerated heating up of the engine, which results in a reduction of fuel consumption and the emission of pollutants, as well as an increased comfort for the vehicle passengers, since the passenger compartment of the vehicle can be heated up more quickly due to the heat supplied from the waste heat producing component and due to the quicker heating of the coolant. The reason is that immediately after the start of the engine, when the engine is still cold, the coolant heated by the waste heat from the waste heat producing component is pumped into the cylinder head in order to heat up the combustion chambers more quickly and therefore to reduce the fuel consumption and the emission of pollutants. Then, after the start of the engine it is the cylinder head which is heated most rapidly by the combustion in the combustion chambers and therefore after a short time the coolant already heated by the waste

heat from the waste heat producing component is further heated in the cylinder head by the waste heat from the combustion after it has been pumped directly into the cylinder head. As a result the temperature of the coolant is higher when it reaches the heating circuit after leaving the cylinder head. Therefore the heating up of the passenger compartment can be accelerated for an increased comfort for the vehicle passengers.

Therefore, new independent claims 18 and 24 and dependent claims 19-23 and 25 are allowable.

Dependent claims 19-23 and 25 are allowable for the reasons set forth above and also include additional patentable subject matter.

In view of the foregoing, entry of the above amendment and allowance of claims 18-25 are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Price', is written over the typed name.

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